WHAT IS CLAIMED IS:

Sub A1 1. A method of modulation, comprising the steps of:

periodically and alternately subjecting an input digital signal to first modulation and second modulation to convert the input digital signal into a pair of a baseband I signal and a baseband Q signal, the first modulation and the second modulation being different from each other; and

outputting the pair of the baseband I signal and the baseband Q signal.

2. A method as recited in claim 1, wherein the first modulation is at least 8-signal-point modulation, and the second modulation is phase shift keying.

Sub A2 3. A method as recited in claim 2, wherein the phase shift keying is quadrature phase shift keying.

Sub C1 4. A method as recited in claim 3, wherein the quadrature phase shift keying provides signal points on an I axis and a Q axis in an I-Q plane.

Sub A3 5. A method as recited in claim 2, wherein the at least 8-signal-point modulation is at least 8 quadrature amplitude modulation.

Sub C1 6. A method as recited in claim 4, wherein the at least 8-signal-

point modulation is at least 8 quadrature amplitude modulation.

7. A method as recited in claim 5, wherein the at least 8 quadrature amplitude modulation is 16 quadrature amplitude modulation.

8. A method as recited in claim 6, wherein the at least 8 quadrature amplitude modulation is 16 quadrature amplitude modulation.

9. A method as recited in claim 5, wherein the at least 8 quadrature amplitude modulation provides signal points which result from rotation of signal points of at least 8-value normal quadrature amplitude modulation through an angle of $\pi/4$ radian about an origin in an I-Q plane.

10. A method as recited in claim 6, wherein the at least 8 quadrature amplitude modulation provides signal points which result from rotation of signal points of at least 8-value normal quadrature amplitude modulation through an angle of $\pi/4$ radian about an origin in an I-Q plane.

11. A method as recited in claim 7, wherein the 16 quadrature amplitude modulation provides signal points which result from rotation of signal points of 16-value normal quadrature amplitude modulation through an angle of $\pi/4$ radian about an origin in an I-Q

plane.

12. A method as recited in claim 8, wherein the 16 quadrature amplitude modulation provides signal points which result from rotation of signal points of 16-value normal quadrature amplitude modulation through an angle of $\pi/4$ radian about an origin in an I-Q plane.

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13. A method as recited in claim 2, wherein a maximum of amplitudes corresponding to signal points of the at least 8-signal-point modulation in an I-Q plane is equal to an amplitude of a signal point of the phase shift keying in the I-Q plane.

14. A method as recited in claim 7, wherein a distance between signal points of the 16 quadrature amplitude modulation in an I-Q plane is equal to a given value times a distance between signal points of the phase shift keying in the I-Q plane, the given value being in a range of 0.9 to 1.5.

15. A method as recited in claim 7, wherein a distance between signal points of the 16 quadrature amplitude modulation in an I-Q plane is equal to twice a distance between signal points of the phase shift keying in the I-Q plane.

16. A method as recited in claim 8, wherein a distance between signal points of the 16 quadrature amplitude modulation in the I-Q

plane is equal to $\sqrt{2}$ times a distance between signal points of the quadrature phase shift keying in the I-Q plane.

17. A method as recited in claim 2, wherein the phase shift keying providing periodically-spaced symbols which represent corresponding portions of the input digital signal in terms of differences between phases of the periodically-spaced symbols.

18. A method as recited in claim 17, wherein the at least 8-signal-point modulation assigns logic states of the input digital signal to respective signal points for a first symbol in response to a signal point used by a second symbol of the phase shift keying which precedes the first symbol.

19. A method as recited in claim 17, wherein the at least 8-signal-point modulation is at least 8 quadrature amplitude modulation.

20. A method as recited in claim 19, wherein the at least 8 quadrature amplitude modulation is 16 quadrature amplitude modulation.

21. A method as recited in claim 19, wherein the at least 8 quadrature amplitude modulation provides signal points which result from rotation of signal points of at least 8-value normal quadrature amplitude modulation through an angle of $\pi/4$ radian about an origin in an I-Q plane.

22. A method as recited in claim 20, wherein the 16 quadrature amplitude modulation provides signal points which result from rotation of signal points of 16-value normal quadrature amplitude modulation through an angle of $\pi/4$ radian about an origin in an I-Q plane.

23. A method as recited in claim 17, wherein the phase shift keying is quadrature phase shift keying.

24. A method as recited in claim 23, wherein the quadrature phase shift keying provides signal points on an I axis and a Q axis in an I-Q plane.

25. A method as recited in claim 1, wherein the first modulation is 16 quadrature amplitude modulation, and the second modulation is quadrature phase shift keying.

26. A method as recited in claim 25, wherein the 16 quadrature amplitude modulation provides signal points which result from rotation of signal points of 16-value normal quadrature amplitude modulation through an angle of $\pi/4$ radian about an origin in an I-Q plane.

27. A method as recited in claim 25, wherein the quadrature phase shift keying provides signal points on an I axis and a Q axis in

an I-Q plane.

28. A method as recited in claim 25, wherein the 16 quadrature amplitude modulation provides signal points which result from rotation of signal points of 16-value normal quadrature amplitude modulation through an angle of $\pi/4$ radian about an origin in an I-Q plane, and the quadrature phase shift keying provides signal points on an I axis and a Q axis in the I-Q plane.

29. A method as recited in claim 25, wherein a maximum of amplitudes corresponding to signal points of the 16 quadrature amplitude modulation in an I-Q plane is equal to an amplitude of a signal point of the quadrature phase shift keying in the I-Q plane.

30. A method as recited in claim 25, wherein a distance between signal points of the 16 quadrature amplitude modulation in an I-Q plane is equal to a given value times a distance between signal points of the quadrature phase shift keying in the I-Q plane, the given value being in a range of 0.9 to 1.5.

31. A method as recited in claim 25, wherein a distance between signal points of the 16 quadrature amplitude modulation in an I-Q plane is equal to twice a distance between signal points of the quadrature phase shift keying in the I-Q plane.

32. A method as recited in claim 26, wherein a distance between

signal points of the 16 quadrature amplitude modulation in the I-Q plane is equal to $\sqrt{2}$ times a distance between signal points of the quadrature phase shift keying in the I-Q plane.

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33. A transmission apparatus comprising:

first means for periodically and alternately subjecting an input digital signal to first modulation and second modulation to convert the input digital signal into a pair of a baseband I signal and a baseband Q signal, the first modulation and the second modulation being different from each other, the first modulation being at least 8-signal-point modulation, the second modulation being phase shift keying; and

second means for outputting the pair of the baseband I signal and the baseband Q signal.

34. A reception apparatus comprising:

first means for recovering a pair of a baseband I signal and a baseband Q signal from a received signal; and

second means for periodically and alternately subjecting the pair of the baseband I signal and the baseband Q signal to first demodulation and second demodulation to convert the pair of the baseband I signal and the baseband Q signal into an original digital signal;

wherein the first demodulation is for signals of at least 8 signal points modulation, and the second demodulation is phase shift keying demodulation.

35. A radio communication system comprising:

a transmission apparatus including:

a1) first means for periodically and alternately subjecting an input digital signal to first modulation and second modulation to convert the input digital signal into a pair of a baseband I signal and a baseband Q signal, the first modulation and the second modulation being different from each other, the first modulation being at least 8-signal-point modulation, the second modulation being phase shift keying;

a2) second means for converting the pair of the baseband I signal and the baseband Q signal generated by the first means into a corresponding RF signal; and

a3) third means for transmitting the RF signal generated by the second means;

a reception apparatus including:

b1) fourth means for receiving the RF signal transmitted by the third means;

b2) fifth means for recovering a pair of a baseband I signal and a baseband Q signal from the RF signal received by the fourth means; and

b3) sixth means for periodically and alternately subjecting the pair of the baseband I signal and the baseband Q signal recovered by the fifth means to first demodulation and second demodulation to convert the pair of the baseband I signal and the baseband Q signal into an original digital signal;

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wherein the first demodulation is for signals of at least 8 signal points modulation, and the second demodulation is phase shift keying demodulation.